

## AMENDMENT AND RESPONSE

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Serial No.: 10/027,926

Filing Date: 12/22/2001

Attorney Docket No. 100.268US01

Title: MESSAGE-BASED COMMUNICATION OVER BUS BETWEEN CARDS IN AN ELECTRONIC MODULE

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REMARKS

Applicant has reviewed the Office Action mailed on November 16, 2005 as well as the art cited. Claims 1, 4-7 and 10 have been amended. Claims 11-13 have been added. As a result, claims 1-13 are pending in this application.

Rejections Under 35 U.S.C. § 102

Claims 1, 2, and 4 were rejected under 35 USC § 102(a) as being anticipated by Roy, (U.S. Patent No. 6,049,531). Claims 1 and 4 have been amended. These amendments do not add any limitations to claims 1 and 4. Rather, the amendments have been entered to clarify limitations already present in the claims. As a result, Applicant respectfully traverses this rejection.

Claim 1 reads as follows:

1. A method for communicating between cards in an electronic module, the method comprising:
  - generating a message for transmission at a first card in the electronic module;
  - transmitting the message over a bus to a second card in the same electronic module by-passing an IP stack at the first card;
  - monitoring a queue at the second card for messages from the first card; and
  - reading a message from the queue at the second card when received from the first card.

(Emphasis added) The Office Action relied on Roy in rejecting claim 1. The Office Action took the position that Roy discloses a "multimedia conferencing system architecture ... and transmits the ATM cells over ATM backbone network 111-9 (bus) *bypassing the IP stack*; see Fig. 5."

Applicant respectfully asserts that Roy does not disclose the method of claim 1. Roy does not disclose transmitting a message over a bus to a second card *in the same electronic module by-passing an IP stack* at the first card as called for in claim 1. The elements identified by the Examiner as being the first and second card are not in the same electronic module. Applicant

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asserts that there is nothing in Roy to suggest transmitting the message over a bus to a second card in the same electronic module by-passing an IP stack at the first card as called for in claim 1. Therefore, Roy does not anticipate claim 1. Accordingly, it is respectfully requested that the rejection of claim 1 be withdrawn.

Claims 2 and 4 depend from claim 1. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn for at least the same reasons as claim 1.

Rejections Under 35 U.S.C. § 103

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Roy (U.S. Patent No. 6,049,531) in view of Yokoyama et al. (U.S. Patent No. 6,307,857), hereinafter referred to as Yokoyama. Applicant respectfully traverses this rejection.

Claim 5 depends from claim 1, and as such, includes all the patentable limitations of claim 1. Applicant refers the Examiner to the arguments presented above with respect to claim 1.

Further, the Office Action took the position that while Roy teaches a method for communicating, it fails to specifically disclose a method for creating and registering a message queue. The Office Action indicated that Yokoyama discloses these features. The Office Action then concluded that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Roy and Yokoyama to "includes a method of registering buffers in order to have an indication of available buffers."

Roy fails to specifically disclose transmitting the message [of a selected application] over a bus to a second card *in the same electronic module by-passing an IP stack* at the first card. Further, nowhere does the Office Action explain exactly what in the proposed combination would be "creating [the queue at the second card]" (as recited in claim 5) and what would be "registering the queue at the second card" (as recited in claim 5). Applicant respectfully asserts

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that these elements are missing from the references, taken alone or in combination. Accordingly, it is respectfully requested that the rejection of claim 5 be withdrawn.

Claims 3, and 6-9 were rejected under 35 USC § 103(a) as being unpatentable over Roy (U.S. Patent No. 6,049,531) in view of Kabie et al. (U.S. Patent No. 6,795,445), hereinafter referred to as Kabie. Claims 6 and 7 have been amended. These amendments do not add any limitations to claims 6 and 7. Rather, the amendments have been entered to clarify limitations already present in the claims. As a result, Applicant respectfully traverses this rejection.

Claim 3 depends from claim 1, and as such, includes all the patentable limitations of claim 1. Applicant refers the Examiner to the arguments presented above with respect to claim 1.

Further, the Office Action took the position that while Roy teaches a method for communicating over multimedia personal computers, it fails to specifically "teach applications on cards." The Office Action indicated that Kabie discloses these features. The Office Action then concluded that Kabie teach[es] "a hierarchical bandwidth management model comprising applications that can be assigned to application pools" and "with respect to claim 3, the application pools allow communications between nodes."

Roy fails to specifically disclose transmitting the message over a bus to a second card in the same electronic module by-passing an IP stack at the first card. The proposed combination with Kabie does not remedy this because Kabie, alone or in combination with Roy, also fails to teach generating a message for transmission between an application on the first card and an application on the second card *in the same electronic module* as disclosed in claim 3.

Accordingly, it is respectfully requested that the rejection of claim 3 be withdrawn.

Claim 6 is as follows:

6. A method for communicating between cards in an electronic module, the method comprising:

generating a message for transmission from an application at a first card in the electronic module to an associated application at a second card in the same electronic module;

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transmitting the message over a cell-based bus as a message to the second card by-passing an IP stack;

queuing the message in a queue for the associated application at the second card;  
monitoring the queue at the second card for messages from the first card; and  
reading a message from the queue at the second card when received from the first card.

(Emphasis added) The Office Action took the position that while Roy teaches a method for communicating over multimedia personal computers, it fails to specifically “teach applications on cards.” The Office Action indicated that Kabie discloses these features. The Office Action then concluded that “Claim 6 is the same as dependent claim 2 with the limitation that applications in the cards are generating messages for transmission.”

Roy and Kabie, alone or in combination, fail to specifically disclose transmitting the message over a cell-based bus as a message to the second card *in the same electronic module by-passing an IP stack*. Applicant refers the Examiner to the arguments presented above with respect to claim 1. Accordingly, it is respectfully requested that the rejection of claim 6 be withdrawn.

Claim 7 is as follows:

7. A method for communicating between cards in a digital subscriber line access multiplexer (DSLAM), the method comprising:

generating a message for transmission from an application at a first card in the DSLAM to an associated application at a second card in the same DSLAM;

by-passing the IP stack for the message;

queuing the message at the first card;

transmitting the message over a cell-based bus as a message to the second card;

queuing the message in a queue for the associated application at the second card;

monitoring the queue at the second card for messages from the first card; and

reading the message from the queue at the second card when received from the first card.

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(Emphasis added) The Office Action concluded that "Claim 7 is the same as independent claim 6 with the limitation that the method is for communication between cards in a digital subscriber line access multiplexer."

Applicant respectfully contends that the Examiner did not fully address the limitations in claim 7. No *prima facie* case of obviousness has been presented.

MPEP 2143 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Roy and Kabie, alone or in combination, do not teach or suggest a method containing each of the elements of claim 7 as described above. More specifically, Roy and Kabie do not teach or suggest generating a message for transmission from an application at a first card in the DSLAM to an associated application at a second card *in the same DSLAM* as called for in claim 7, nor do the references teach or suggest *by-passing the IP stack* for the message. Further, Roy and Kabie do not teach or suggest transmitting the message over a cell-based bus as a message to the second card.

There is no suggestion of any motivation to apply any teaching in Roy to modify Kabie to form a method for communication between cards in a digital subscriber line access multiplexer as found in claim 7. No suggestion or motivation of such a method, or even a reason to attempt such a method, is disclosed in the cited references. Accordingly, it is respectfully submitted that the rejection of claim 7 be withdrawn.

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Claim 8 depends from claim 7. Accordingly, it is respectfully requested that the rejection of these claims be withdrawn for at least the same reasons as claim 7.

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Claim 9 is as follows:

9. An electronic module, comprising:

a first card including at least one application running on the first card;

a second card including at least one related application running on the second card;

a bus, communicatively coupled to both the first and the second cards;

wherein communication between the at least one application on the first card and the at least one application on the second card is accomplished by messages passed over the bus between the first and second cards by-passing the IP stack on the first and second cards.

(Emphasis added) The Office Action concluded that "With respect to claim 9, the module described has the functionality of the method described in claim 6."

Roy and Kabie, alone or in combination, fail to specifically disclose communication between the at least one application on the first card and the at least one application on the second card is accomplished by messages passed over the bus between the first and second cards *by-passing the IP stack on the first and second cards in the same electronic module.*

Accordingly, it is respectfully submitted that the rejection of claim 9 be withdrawn.

Further, with respect to claims 3, 6, 7 and 9, the Office Action indicated that "it would have been obvious to one skilled in the art at the time of the invention to include applications in ATM ADSL modems 103-1 and 103-2 (first and second card respectively) in order to eliminate the inefficiency of having an external application running said modems." When applying 35 U.S.C. §103(a) the claimed invention must be considered as a whole; the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; the references must be viewed without the benefit of impermissible hindsight afforded by the claimed invention and a reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

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As indicated above, impermissible hindsight cannot be used to make a rejection under 35 U.S.C. §103(a). Applicant contends that the Examiner is impermissibly using the present application as a road map in rejecting claims 3, 6, 7 and 9 in view of the references cited. However, as indicated above, even with the use of hindsight the rejection of claims 3, 6, 7 and 9 falls short because neither Roy nor Kabie teach "by-passing an IP stack at a first card in an electronic module" as found in claims 3, 6, and 7, and neither Roy nor Kabie teach "messages passed over the bus between the first and second cards by-passing the IP stack on the first and second cards" as found in claim 9. Thus, the combination of the references is not proper and the rejection should be withdrawn.

Allowable Subject Matter

Claim 10 was objected to as being dependent upon a rejected base claim, but was indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has fully considered Examiner's decision, and refers Examiner to amended claim 10. As a result, Applicant respectfully requests indication of allowance of claim 10.



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**CONCLUSION**

Applicant respectfully submits that claims 1-13 are in condition for allowance and notification to that effect is earnestly requested. Two additional independent claims over the four originally paid for have been added. A Credit Card Payment Form PTO-2038 is enclosed herewith for payment of the \$400 additional claims fees. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at the telephone number listed below.

Date: February 16, 2006

Respectfully submitted,



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